UXO Pro

15 Park Avenue
Gaithersburg. MD 20877

Memorandum

From: Steve Willis
To: Wayne Miller
Date: November 8, 2019
Subject: October 30-31, and November 7, 2019 Site visits to observe groundwater sampling activities at Former Williams Air Force Base.

Mr. Miller:

UXO Pro conducted site visits to the Former Williams Air Force Base on October 30 and 31, and November 7, 2019 to observe and document groundwater sampling activities associated with the Enhanced Bioremediation (EBR) program.

October 30, 2019

On October 30 I observed sampling of Lower Saturated Zone well LSZ28, located on the south side of Ulysses Avenue west of the site office trailer. The well was sampled using a discrete interval stainless steel bailer. The bailer was lowered into the well by hand using a wireline and was fitted with polyethylene tubing attached to a hand-operated pump. The sampler was pressurized before being lowered into the well to prevent water flowing into the sampler prior to reaching the selected sample depth of approximately 215-ft. Upon reaching the sampling depth, the pressure was released allowing water to fill the bailer. After allowing a short time for the bailer to fill, the bailer was re-pressurized and raised to the surface. The sample was then transferred into the appropriate sample containers using the sample release device, allowing water to flow from the bottom of the bailer. Samples were submitted to TestAmerica for analysis of VOCs, SVOCs, metals, and sulfate. The groundwater temperature at the time of sampling was approximately 130° F .

Following the collection of samples, the bailer and associated sampling equipment was decontaminated using Alconox, tap water, and deionized water. When decontamination was complete, the sampling crew determined they would not sample any additional wells, as they needed to leave the site to obtain additional supplies.

October 31, 2019

I returned to the site on October 31 to observe sampling of additional wells using the low-flow purging and sampling method. Sampling was conducted using a QED pneumatic bladder pump and associated controller. Sampling was in progress at well LSZ10. According to Wood field personnel, the total depth of the well was measured as 210-ft and

the sample pump was set at a depth of 200-ft. Available well construction data for this well, including the Arizona Department of Water Resources Imaged Records database, indicates the well was drilled to 242-ft. and is screened between 205.5 - 240.5-ft. Subsequent discussions with Wood confirmed both the well depth and the pump setting. The pump could not be lowered past 210-ft. due to an apparent obstruction, although a measuring rod confirmed the total depth of approximately 240-ft. As a result, the reported sample depth of 200-ft. is 5-ft. above the top of the screened interval.

Samples were collected for VOCs, TPH, metals, and sulfate. An additional sample was collected for BART field test analysis. At the time of sampling, the groundwater temperature was 100° F.

After decontaminating the sampling equipment, the sampling crew moved to well LSZ15. The sample pump was set at a depth of 230-ft. Groundwater was purged for approximately 1-hr with field parameters being measured at approximate 5-minute intervals. The groundwater temperature at the time of sampling was 93° F. Samples were collected for VOCs, TPH, metals, and sulfate, in addition to BART field testing.

Wood field personnel indicated the BART test kits are transported on the day of sampling to WOOD's Phoenix office, where they are checked periodically under ambient conditions.

In addition to the ongoing groundwater sampling, the pumps in wells LSZ37 and LSZ43 were being pulled for repairs. The pump in well CZ21 was recently re-installed and was working properly.

November 7, 2019

Sampling continued November 7. I observed the sampling of well U37 located on the east side of Sossaman Rd. The well was purged for approximately 1-hr using the QED low-flow pump prior to sampling. Depth to groundwater was measured at 142.75-ft. and the pump was set at 164-ft. The reported well construction data for this well indicates the well is screened from 160 – 190-ft. Samples were collected for VOCs, TPH, metals, nitrate, and sulfate. Following the collection of samples, the field crew completed paperwork, deconned the sampling equipment, and packed samples for transport to the laboratory. No additional wells were sampled.

According to Wood field personnel, the pump in well CZ21 failed and would need to be pulled again. The pumps in wells LSZ37 and LSZ43 were repaired, re-installed, and working properly.

Attachment 1 includes photos taken during the site visits.

Please contact me at (480) 316-3373 or e-mail at steve@uxopro.com if you have comments or questions regarding this memorandum.

Thank you,

Steve Hill

UXOPro, Inc.

ATTACHMENT 1
SITE PHOTOS

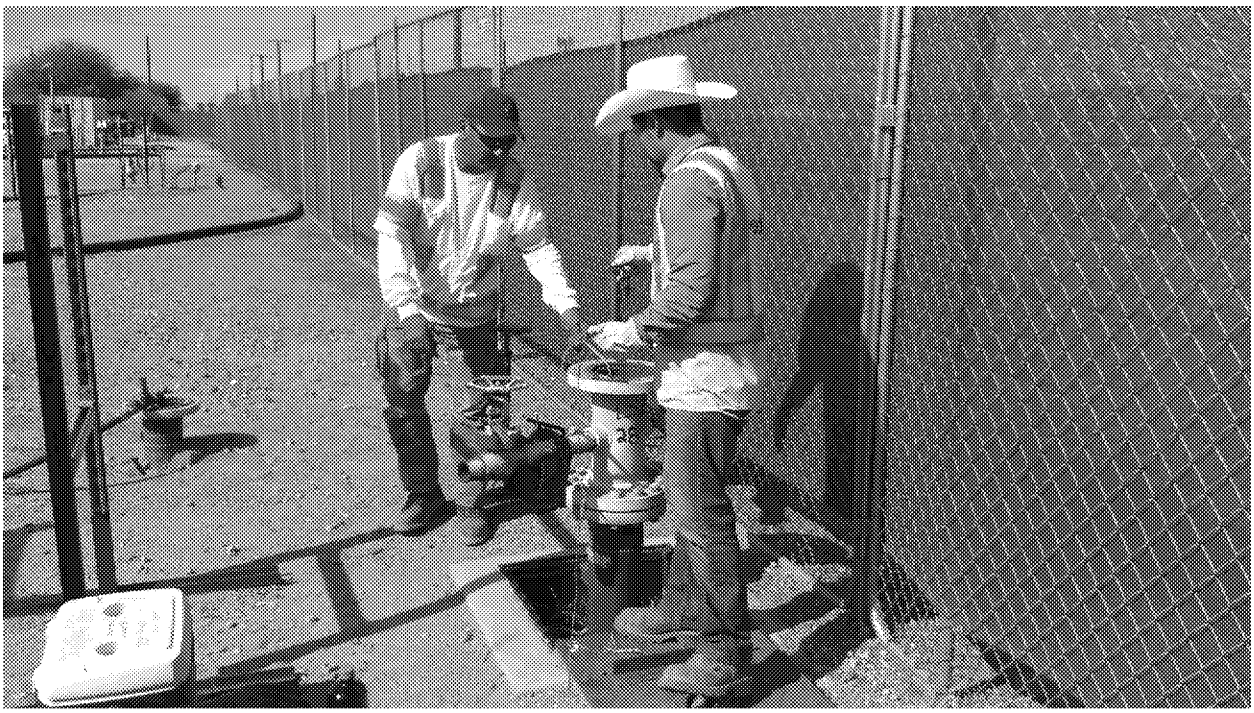

Photo 1. Lowering the sampling bailer into well LSZ28

Photo 2. Collecting a sample from the bailer

Photo 3. Decontaminating the sampling equipment following sampling of well LSZ28

Photo 4. Purging well LSZ15 with the low-flow pump

Photo 5. Collecting VOC samples from well LSZ15

Photo 6. Collecting a sample for metals analysis from well LSZ15

Photo 7. Collecting a sample for the BART field test kit from well LSZ15

Photo 8. BART field test kit sample from well LSZ15

Photo 9. Collecting VOC samples from well U37.